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ABSTRACT

This study was conducted to test Bordin's (1983) proposition that, in supervision, counselor trainees' perceptions of the supervisory working alliance (goals, tasks, and an emotional bond) are predictive of supervisory outcomes (trainee self-efficacy and trainee satisfaction with supervision) over time. Beginning practicum to intern level counselor trainees (N=107) completed the Working Alliance Inventory, the Self-Efficacy Inventory, the Trainee Personal Reaction Scale, and a demographic questionnaire that also assessed trainee experience level. The results indicated that changes in the supervisory working alliance were not predictive of changes in trainee self-efficacy. Changes in the supervisory working alliance, however, were predictive of trainee satisfaction with supervision. Bordin's model and theoretical propositions were supported by the findings in that the supervisory working alliance was significantly related to one aspect of supervision outcome. The results seemed to provide evidence which suggests that the supervisory working alliance changes over time and this change needs to be considered when evaluating its effectiveness. (NB)

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The Supervisory Working Alliance: Its Relation To Trainee Self-Efficacy and Satisfaction With Supervision

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Abstract

The purpose of this study was to test Bordin's (1983) proposition that, in supervision, counselor trainees' perceptions of the supervisory working alliance (goals, tasks, and an emotional bond) are predictive of supervisory outcomes (trainee self-efficacy and trainee satisfaction with supervision) over time. Data from 107 beginning practicum to intern level counselor trainees were sampled. The results indicated that changes in the supervisory working alliance were not predictive of changes in trainee self-efficacy however changes in the supervisory working alliance were predictive of trainee satisfaction with supervision. Implications for theory, research, and practice of counseling supervision were addressed.

Introduction

The importance of counselor supervision is attested to by a proliferation of theoretical models over the past decade (Bernard, 1979; Blocher, 1983; Bordin, 1983; Hess, 1980; Littrell, Lee-Borden, & Lorenz, 1979; Loganbill, Hardy, & Delworth; 1982; Stoltenberg, 1981). Along with the increase in conceptual models has come the recognition that no single model seems to explain the change process in supervision more adequately than any other (Holloway, 1987). In all probability, most supervisors tend to work from more than one model (Loganbill et al., 1982), just as most therapists tend to draw on different approaches in their work with clients.

With respect to psychotherapy, it has become increasingly clear that, in general, different approaches tend to be roughly equally effective, at least in terms of global or symptom-based outcomes (Greenberg & Pinsof, 1986; Shapiro & Shapiro, 1983; Smith & Glass, 1977). One possible explanation is that the common, or nonspecific, elements of psychotherapy account for a greater proportion of the variability in therapeutic change than do the treatment-specific elements (e.g., Stiles, 1990). As is the case for psychotherapy, supervision theorists have begun to recognize the presence of various common factors that cut across supervision models and that seem to play a significant role in the outcome of supervision. In particular, the supervision relationship has gained the reputation of being one of the potentially important common factors in the change process of supervision (Efstation, Patton, & Kardash, 1990; Ekstein & Wallerstein, 1972; Holloway 1987; Mueller & Kell, 1972; Patterson, 1983).

The supervisory working alliance (Bordin, 1983) is one construct that has been advanced to explain how the supervisory relationship affects the outcome of supervision. The supervisory alliance refers to a collaboration between supervisee and supervisor for change in the supervisee based on a mutual understanding of the goals and tasks of supervision and mutual emotional bonding (Bordin, 1983). While there have been no studies that have tested Bordin's (1983) prediction that a favorable working alliance is associated with positive supervisory outcomes, there is strong support in the psychotherapeutic literature for the therapeutic working alliance as an important contributing factor to the success of psychotherapy (Horvath & Symonds, 1991). Because the working alliance is considered to be a pantheoretical mechanism of change, Bordin's extension of the construct to the supervision domain seems warranted. The validity of this extension has yet to be tested, however.

Bordin (1983) conceptualized the working alliance in supervision as a multidimensional construct consisting of three interrelated factors: (a) mutual agreement between supervisee and supervisor pertaining to the goals of the supervision (e.g., mastery of counseling skills), (b) mutual agreement pertaining to the tasks in supervision (observation of therapy sessions), and (c) an emotional bond between supervisee and supervisor (feelings of mutual caring, trusting, liking, and respect).

A number of theorists have addressed the importance of changes over time in the working alliance, suggesting that the working alliance is dynamic versus constant (e.g., Bordin, 1979; Gelso & Carter, 1985). Bordin (1983) refers to the dynamic aspects of the working alliance as the "building and repair" of the working alliance. More specifically, the building and repair of the working alliance refers to the positive and negative experiences that occur during supervision over the course of the learning process. These experiences result from various supervisory activities that influence the behaviors, thoughts, and feelings of the supervisee. Theoretically, when the supervisee's thoughts, feelings, and actions are more positive, the supervisory working alliance tends to become stronger. Alternatively, when the supervisee's thoughts, feelings, and actions are more negative, the supervisory working alliance tends to become weaker. Theoretically, these experiences are reflected in changes in the three factors of the working alliance which are related to changes in supervision outcome. Therefore, given that the supervisory working alliance is dynamic, it seems important to take into consideration changes in the factors of the supervisory alliance over time.

Trainee Self-Efficacy

Bordin (1983) outlined eight general supervision goals or desired outcomes that result from the development of a strong supervisory working alliance; one of which includes the process of mastering specific therapeutic skills. Involved in the process of mastering specific therapy related skills is the trainees' confidence in performing various therapy related skills. The choice of this outcome criterion is based on Bandura's (1977, 1982) self-efficacy theory, in which he postulated a direct relationship between one's confidence in performing a set of behaviors successfully (i.e., the strength of one's self-efficacy expectations) and the actual performance of those behaviors.

In an extension of the concept of self-efficacy to the context of training and supervision, Friedlander and Snyder (1983) demonstrated the importance that the supervisee's sense of personal mastery of specific

counseling related skills (e.g., writing case reports, conducting group therapy sessions, and so forth), has on the process of counselor supervision. The specific therapy related skills in Friedlander and Snyder's (1983) concept of trainee self-efficacy are similar to those referred to in Bordin's (1983) model of the working alliance. Such skills include conceptualizing client problems, responding empathically to clients, or making appropriate referrals (Bordin, 1983). One could expect the trainee's level of self-efficacy to be affected positively when he or she participates in a positive supervisory experience (i.e., a strong supervisory working alliance). Conversely, it could be predicted that the trainee's level of self-efficacy would be affected negatively when he or she participates in a negative supervisory experience (i.e., a weak supervisory working alliance).

There is one research endeavor that supports the prediction of a relationship between the supervisory working alliance and trainee self-efficacy. In an investigation designed to assess the validity of their measure of the supervisory working alliance, Efstation et al. (1990) examined the relationship between the trainees' self-efficacy expectations and perceptions of the supervisory alliance. Participants were advanced practicum trainees and interns who rated their current supervisory relationship and their personal sense of confidence in performing various therapy related skills. Results indicated a significant positive relationship between self-efficacy expectancies and the perceived strength of the supervisory working alliance.

While Efstation et al.'s work somewhat supports Bordin's (1983) hypothesis about the link between the alliance and supervisory outcome, there remains deficiencies in their approach to understanding completely the relationship between the supervisory working alliance and trainee self-efficacy. First, the instrument developed by Efstation et al. does not correspond to the three factors of the alliance proposed Bordin. Instead, there was no clear theoretical model of the supervisory working alliance that the study was based on. As such, it was unclear what specifically was being investigated. So, the current investigation used the Working Alliance Inventory (Bahrick, 1989; Bahrick, Russell, and Salmi, 1991) because it was based directly on Bordin's model. Second, the influence of pre-supervision trainee self-efficacy was not considered. Without taking into account pre-supervision trainee self-efficacy, it is unknown whether the measured self-efficacy was related to the supervisory working alliance or some other third variable not examined or controlled for. Third, it was not determined whether perceptions of the supervisory working alliance at different points in the relationship are related to changes in trainee self-efficacy. As mentioned previously, the strength of the supervisory working alliance waxes and wanes throughout supervision and as such, these changes need to be considered in order to derive a more complete understanding of the supervisory process. Fourth, the relationship between trainee self-efficacy expectations and prior supervised psychotherapy experience was not taken into account. It has been documented that trainee self-efficacy expectations are positively correlated with trainee experience level, $r = .55$ (Friedlander & Snyder, 1983). As such, it is unclear the extent to which increases in self-efficacy expectations was due to a stronger supervisory working alliance versus to increases in experience level.

The present study extended Efstation et al.'s work by (a) testing Bordin's model using a measure derived explicitly from that model (i.e., the Supervisory Working Alliance Inventory; Bahrick, 1989; Bahrick, et al., 1991), (b) controlling for pre-supervision trainee self-efficacy expectancies, (c) assessing the relationship of the three factors of the alliance to self-efficacy expectations at different points in time and (d) controlling for trainee supervised psychotherapy experience level.

Satisfaction with Supervision

Thus far it has been argued that enhanced trainee self-efficacy expectancies for various therapy related skills is an important outcome of supervision that is likely to be affected by the quality of the supervisory working alliance. The focus on supervisory outcomes is one important aspect of Bordin's (1983) model. Implicit in this model is the assumption that supervisees tend to be more satisfied with the supervisor and with their own progress within the context of a stronger supervisory working alliance. Testing this assumption is one aspect of the current study.

The trainees' satisfaction with the supervisory relationship has received a fair amount of attention within the supervision literature (Friedlander & Ward, 1984; Heppner & Handley, 1981; Heppner & Roehlke, 1984; Holloway & Wampold, 1983; Holloway & Wampold, 1984; Krause & Allen, 1988; Olk & Friedlander, 1991). Satisfaction refers to the supervisee's reaction to his or her supervisor's perceived personal qualities and performance, the judgment of his or her own behavior in supervision, and the level of comfort when expressing his or her own ideas in supervision (Holloway and Wampold, 1984). Much of the attention paid to satisfaction as a factor in supervision is due to the assumption that higher levels of

satisfaction are necessary for the supervisee to be willing to work on and ultimately achieve various learning goals in supervision (Heppner and Handley, 1981).

It seems logical to expect that trainees will be more satisfied when the supervisory alliance is favorable. When the emotional bond is strong, the supervisee is more likely to feel comfortable with the supervisor and to view the personal qualities and attitude of the supervisor favorably. When the goals and tasks of supervision are clearly understood, collaboration in supervision is expected to be facilitated, and the trainee's comfort with the supervisor and evaluation of his or her own behavior will be enhanced. Alternatively, if the supervisory working alliance is weak or if it is in the process of repair, it seems reasonable to suspect that trainees will be less satisfied.

There is also some evidence which suggests that trainee satisfaction with supervision is related to trainee experience level (Heppner & Roehlke, 1984; Krause & Allen, 1988). As such, the present study controlled for trainee experience level when the relationship between the supervisory working alliance and trainee satisfaction with supervision was examined. As mentioned previously, trainee experience level was not used as a primary variable in the present investigation because according to Bordin, it is not considered salient in the prediction of supervision outcome.

Although satisfaction with supervision has been examined with respect to other aspects of the supervisory relationship (e.g., Friedlander & Ward, 1984; Heppner & Handley, 1981; Heppner & Roehlke, 1984; Holloway & Wampold, 1983; Olk & Friedlander, 1991), research has not yet determined the extent to which satisfaction is related to the supervisory working alliance. Thus the extension of the results from these earlier investigations seems limited. The inclusion of satisfaction in the present study is further warranted by evidence in the psychotherapy literature suggesting a relationship between the therapeutic working alliance and client satisfaction (Luborsky, Crits-Cristoph, Alexander, Margolis, & Cohen, 1983; Morgan, Luborsky, Crits-Cristoph, Curtis, & Solomon, 1982). Given the argument presented, the present investigation attempted to demonstrate empirically that changes in the supervisory working alliance correspond to changes in trainee satisfaction with supervision, controlling for experience level.

Summary and Hypotheses

The purpose of this study was to test Bordin's (1983) extension of the concept of the therapeutic working alliance to the supervisory relationship. Generally, the present investigation was designed to determine whether changes in trainees' perceptions of the supervisory alliance are related to changes in their reported self-efficacy expectations and their satisfaction with supervision, controlling for trainee experience level. The specific hypotheses for the current study were as follows:

(1) It was hypothesized that changes in the strength of trainees' self-efficacy is a function of changes in their perceptions of the three aspects of the supervisory alliance, controlling for trainee experience level. Specifically, it was expected that as the supervisory working alliance becomes stronger, that is, as perceived agreement on the goals and tasks of supervision increases and as perceived levels of emotional bonding between supervisor and supervisee increase, there will be greater positive changes in trainee self-efficacy. Alternatively, it was expected that as the supervisory working alliance becomes weaker, that is, as perceived agreement on the goals and tasks of supervision decreases and as perceived levels of emotional bonding between supervisor and supervisee decrease, there will be changes in the negative direction in trainee self-efficacy. Also, these hypothesized relationships were predicted to occur after extracting the variance due to trainee experience level.

(2) It is hypothesized that changes in the level of trainees' satisfaction with supervision is a function of changes in their perceptions of the three aspects of the supervisory alliance, controlling for trainee experience level. Specifically, it was expected that as the supervisory working alliance becomes stronger, that is, as perceived agreement on the goals and tasks of supervision increase and as perceived levels of emotional bonding between supervisor and supervisee increase, there will be greater positive changes in trainee satisfaction with supervision. Alternatively, it was expected that as the supervisory working alliance becomes weaker, that is, as perceived agreement on the goals and tasks of supervision decreases and as perceived levels of emotional bonding between supervisor and supervisee decrease, there will be changes in the negative direction in trainee satisfaction with supervision, after extracting the variance due to trainee experience level.

Method

Participants

On the basis of a power analysis (Cohen, 1988) using alpha = .05 and an effect size of η^2 = .157 (estimated from previous research on the working alliance as a predictor of outcome; Efstation, et al., 1990; Horvath & Symonds, 1991; Luborsky, et al., 1983; Morgan, et al., 1982), a sample size of 100 was required to yield statistical power of .90. A total of 151 counselor trainee volunteers completed the questionnaire materials at Time 1. Twenty-two packets were excluded from subsequent analyses because they did not meet the inclusion criteria for the investigation. Specifically, the participants who did not meet the inclusion criteria a) had been supervised previously by their primary supervisor, b) completed the packets at Time 1 outside the range of the third to fifth weeks of supervision, or c) completed the packets at Time 2 outside the range of the eleventh to sixteenth weeks of supervision. Of the 128 remaining participants, 107 returned and completed the materials at both Time 1 and Time 2, which resulted in an 83.6% response rate.

The mean age of the 107 volunteer participants (32.7% men and 67.3% women) was 29.91 (Mdn = 28.00, SD = 6.41) years old. The racial breakdown of respondents was 86.0% Caucasian, 6.5% Black, 2.8% Hispanic, and 1.9% Asian. The majority of the respondents were in the fields of Counseling Psychology (58.9%) and Clinical Psychology (36.4%), and were being trained in settings which included College Counseling Centers (40.2%), Community Mental Health Centers (25.2%), and Veterans Administration Hospitals (22.4%). They were either doctoral students (71.0%) or masters students (29.0%) whose level of training was beginning practicum (29.9%), advanced practicum (19.6%), or internship/post doctorate (50.5%). They were in individual supervision an average of 81.0 (Mdn = 60.0, SD = 43.3) minutes per week. Sixty-five percent of the sample had male supervisors and 35% had female supervisors.

The trainees as a group had a median of 12 (M = 22.51, SD = 29.5) months of supervised psychotherapy experience as assessed at Time 1. The descriptive statistics for experience level indicate that this variable does not have a normal sample distribution. Not only does it's mean far exceed its median but its skewness was very high (i.e., 2.592). Because this sample distribution violates the normality assumption for the test statistics used in the current study, a data transformation procedure was conducted. Each experience level item was transformed via the log to the base 10. As a result of this data transformation procedure, the median approximated the mean and the standard deviation and skewness were within appropriate limits (M = .942, Mdn = 1.079, SD = .679 Skewness = -.165). This transformed variable was later used in the statistical analyses.

Design

The ex post facto design for the present investigation involved three predictor variables, two criterion variables, and one covariate, all of which were continuously distributed. The three predictor variables were trainees' scores on the three subscales of the Working Alliance Inventory - Trainee Version (WAI-T; Bahrick, 1989; Bahrick, et al., 1991): (a) Agreement on Goals, (b) Agreement on Tasks, and (c) Emotional Bond. The criterion variables were trainees' self-reported perceptions on (a) the Self-Efficacy Inventory (S-EI; Friedlander & Snyder, 1983) and (b) the Trainee Personal Reaction Scale (TPRS; Holloway & Wampold, 1984), a measure of reported satisfaction with supervision. The covariate, trainee experience level, was assessed by the number of months of supervised psychotherapy experience. The WAI-T, S-EI, and TPRS were administered to participants at two points in time, i.e., between the third and fifth weeks of supervision (Time 1) and between the eleventh and sixteenth weeks (Time 2) of supervision. The covariate, trainee experience level, was assessed at Time 1.

Measures

Working Alliance Inventory. The Working Alliance Inventory - Trainee Version (WAI-T; Bahrick, 1989; Bahrick, et al., 1991) is a 36 item self-report instrument that assesses trainees' perceptions of the three factors of the supervisory working alliance. The WAI-T was adapted from Horvath and Greenberg's (1985) Working Alliance Inventory. The original instrument was designed to assess the strength of the working alliance within the therapeutic relationship and is based on Bordin's (1979) model of the therapeutic working alliance.

In revising the WAI for the supervision context, Bahrick, et al., (1991) made minor changes to reflect the supervisory working alliance (Bordin, 1983). Terms such as "therapist" and "client" were changed to "supervisor" and "supervisee," respectively. Furthermore, references to "client problems" were changed to "supervisee issues" or "supervisee concerns". Parallel forms were developed for the trainee (WAI-T) and for the supervisor (WAI-S). The WAI-T contains 36 Likert-type items reflecting supervisees' perceptions of the quality of the supervisory working alliance. The three subscales, each of which contains 12 items, correspond

to the three supervisory working alliance factors (i.e., goals, tasks, and bond). An example of the agreement on goals subscale is "The goals of these sessions are important to me." One item from the agreement on tasks subscale is "I am clear on what my responsibilities are in supervision." On the bonds subscale, one item is "(Supervisor) and I trust one another" For each item supervisees rate their perceptions of the supervisory relationship on a 7-point scale from never (1) to always (7). For each subscale, scores are obtained by summing the item ratings, so that each subscale ranges from 12 to 84 and higher scores reflect higher perceived agreement with the supervisor on the goals and tasks of supervision and a stronger emotional bond between supervisor and supervisee. For the current study all three subscales were used.

Self-Efficacy Inventory. The Self-efficacy Inventory (S-EI; Friedlander & Snyder, 1983) is a 21-item self-report estimate of trainees' perceptions of their self-efficacy expectations, i.e., confidence in their ability to perform specific therapy related activities. Supervisees rate their confidence in their ability to perform each of the 21 counseling activities on a 10-point scale from not confident (0) to completely confident (9). Scores range from 0 to 189, with higher scores reflecting stronger perceptions of self-efficacy expectations in therapy related activities. Internal consistency reliability based on Cronbach's coefficient alpha was .93 (Friedlander & Snyder, 1983).

Trainee Personal Reaction Scale. The revised version of the Trainee Personal Reaction Scale (TPRS; Holloway & Wampold, 1984) is a 12-item self-report instrument that assesses trainees' perceived satisfaction with supervision. Trainees rate the extent to which each item is characteristic of their feelings on a 5-point scale from not characteristic of my feelings (1) to highly characteristic of my feelings (5). Scores range from 12 to 60, with higher scores reflecting a greater degree of satisfaction with supervision. Three factors, each consisting of four items, were identified from factor analysis: Evaluation of Supervisor (the supervisee's reaction to the supervisor's perceived personal qualities and performance), Evaluation of Self as Trainee (the supervisee's judgment of his or her own behavior in supervision), and Level of Comfort (the supervisee's level of comfort in expressing ideas in supervision). An example of the evaluation of supervisor factor is "I was eager to hear what my supervisor had to say." One item from the evaluation of self as trainee dimension is "I sometimes felt like I was being put on the spot." On the comfort factor, one item is "I sometimes resented my supervisor's attitude toward me." Taken together, the three dimensions make up the more general construct, satisfaction with supervision. This overall measure of satisfaction with supervision was used in the present investigation in order to increase the reliability of this dependent variable by increasing the overall number of items and because the average inter-subscale correlations has been found to be relatively high (i.e., $\bar{r}$ = .45) (Holloway & Wampold, 1984).

The average internal consistency for the three subscales is .78 (Holloway & Wampold, 1984). The three factors of the TPRS have been combined and used as an overall measure of satisfaction (Holloway & Wampold, 1984; Olk & Friedlander, 1991); as well as a measure of session-specific satisfaction assessed multiple times during a semester (Holloway & Wampold, 1983). For the present investigation, however, the TPRS was used to assess satisfaction with supervision up to the point during the semester in which the measurement takes place. Therefore, the TPRS was modified slightly to reflect ratings of satisfaction across a period of supervision. Specifically, the instruction "Please put a circle around the answer most representative of your present feelings about the supervision session you just participated in, " was changed to "Please put a circle around the answer most representative of your feelings about supervision with your supervisor over the course of this semester to date".

Trainee Experience Level. Trainee experience level was assessed via a question in the demographic questionnaire which asked the participants write down the "number of months of supervised psychotherapy experience". Trainee experience level has been shown in the previous literature to be related to the criterion variables of the proposed investigation (Friedlander & Snyder, 1983; Heppner & Roehlke, 1984; Krause & Allen, 1988). As such, it was intended to be used as a covariate in the major analyses of the present study.

Demographic Questionnaire. The demographic questionnaire was used to gather the following information about participants: age, gender, ethnic/racial background, primary field of graduate study, year in graduate program, level of training, current degree program, setting, number of months of supervised therapy experience, number of months of therapy experience, gender of supervisor, previous supervision experience with the current supervisor, intentions to work with the supervisor the following semester, and hours per week of supervision.

Procedure

Participants were solicited via personal contacts within graduate programs in the fields of counseling and clinical psychology. Potential participants were asked to participate (through departmental mailboxes and

informal contact) in a study "concerning the process of supervision". Volunteers were asked to complete the WAI-T, S-EI, and TPRS once between the third and fifth weeks (Time 1) and once between the eleventh and sixteenth weeks of supervision (Time 2). The demographic questionnaire, which also contained the covariate, was completed at Time 1. In order to control for ordering effects, the WAI-T, S-EI, and the TPRS were randomized within the questionnaire packet at both Time 1 and Time 2. Participants returned the questionnaire packets to the investigator either by mail in pre-addressed envelopes or via the personal contact at their site. To ensure anonymity, participants were asked to indicate the last four digits of their social security number for purposes of matching Time 2 with Time 1 data. Participation was voluntary. At any point, participants had the right to withdraw from the study. Only those participants who provided data at both data collection points were included in the final analyses.

Results

Reliability of Independent and Dependent Measures

Descriptive statistics and reliability estimates were obtained for the WAI-T and it's three subscales, S-EI, and the TPRS at both Time 1 and Time 2. The Chronbach alpha coefficients for all of the WAI-T subscales exceeded .90 at both time intervals. The Chronbach alpha for the S-EI at Time 1 and Time 2 was .89 and exceeded .85 for the TPRS at both time intervals. The threat to validity of ceiling and floor effects appears to be minimal for all of the independent and dependent measures because all of their medians approximate their means. Table 1 shows a complete listing of the inter-correlations between all of the predictor and criterion variables, as well as the covariate.

Preliminary Analyses

Tests for differential attrition: In order to assess whether differential mortality/attrition took place, χ^2 analyses which compared the participatory and non-participatory groups were conducted on the nominal variables (i.e., trainee sex, ethnic/racial background, level of training, etc.). A series of t-tests were conducted to determine if there were differences between the participatory and non-participatory groups on the predictor and criterion variables as well as the variables age and number of months of supervised experience. The participatory and non-participatory groups did not differ in terms of trainee sex, ethnic/racial background, field, degree program, setting, having been involved with their supervisor in another capacity, involved with their supervisor in group supervision, intention to be supervised by their supervisor the following semester, supervisor gender, χ^2s, ps > .05. There was a significant difference found between the participatory and non-participatory groups, such that the non-participatory group had proportionally more participants who had been in individual supervision with their supervisor previously than the participatory group, $\chi^2(1) = 31.70$, $p < .0001$. This significant difference reflects an exclusion criteria, that is, participants were excluded and placed in the non-participatory group if they had previously been in individual supervision with their current supervisor.

The participatory and non-participatory groups did not differ in terms of age, number of months of supervised experience, or Time 1 ratings on the Task and Goal subscales of the WAI-T, the S-EI, and the TPRS, ts(126), ps > .05. Thus, there was no evidence to suggest that differential attrition occurred between the participatory and non-participatory groups on these variables. However, a significant difference was found between the participatory and non-participatory groups on the variable trainee level, that is, there was a significant difference between the number of participants which were of beginning practicum, advanced practicum, and internship level between the two groups, $\chi^2(2) = 10.516$, $p < .01$, shrunken $\eta^2 = .057$. Upon further examination, these results show a higher percentage of advanced practicum trainees in the non-participatory group than in the participatory group. One explanation for this difference is random sample vagaries. Alternatively, the trichotimiztion of trainee level into beginning practicum, advanced practicum, and intern/post doctorate levels, may have artificially produced differences which are not externally valid. This categorization may have in and of itself produced disproportionate cell frequencies which is not as accurate a reflection of trainee experience level as opposed to number of years in their graduate program or months of supervised psychotherapy experience. Evidence for this hypothesis can be seen in the non-significant difference found between the participatory and non-participatory groups on the variables, trainee graduate year in program, $t(148) = -.17$, $p = .867$, shrunken $\eta^2 < .001$, and number of months of supervised psychotherapy experience, $t(146) = -1.64$, $p = .103$, shrunken $\eta^2 = .011$. It seems that as the range of trainee level expands and becomes more discriminating, the effect becomes more diluted and disappears.

Table 1

Correlations between the predictor and criterion variables.

	TIME 1					TIME 2					CHANGE SCORES				
	GOAL	TASK	BOND	S-EI	TPRS	GOAL	TASK	BOND	S-EI	TPRS	GOAL	TASK	BOND	S-EI	TPRS
TIME 1															
GOAL															
TASK	.9088														
BOND	.7832	.8158													
S-EI	.1131	.1096	.1374												
TPRS	.6610	.7095	.6575	.0922											
TIME 2															
GOAL	.6576	.6092	.5965	-.0364	.4718										
TASK	.5990	.5847	.5561	.0124	.4504	.9406									
BOND	.5268	.5389	.7215	-.0264	.4497	.7838	.7468								
S-EI	.0482	-.0018	.1032	.7306	.0729	-.5045	-.0122	-.0491							
TPRS	.6101	.6309	.6775	.0784	.6241	.7093	.6943	.7479	.0358						
CHANGE															
GOAL	.3322	-.2873	-.1581	-.1762	-.1730	.4922	.4855	.3727	-.1239	.1831					
TASK	-.1875	-.2940	-.1466	-.0931	-.1667	.5094	.6035	.3502	-.0127	.1979	.8544				
BOND	-.2610	-.2856	-.2652	-.2113	-.2088	.3339	.3337	.4763	-.1994	.1810	.7197	.6738			
S-EI	-.0958	-.1563	-.0580	-.4485	-.0342	-.0202	-.0335	-.0271	.2826	-.0633	.0854	.1142	.0359		
TPRS	-.0467	-.0780	.0356	-.0144	-.4182	.2851	.2921	.3551	-.0417	.4487	.4108	.4207	.4493	-.0344	
Exp	-.0691	-.0891	-.1794	.2792	-.0698	-.0178	-.0006	-.0882	.2834	-.1427	.0575	.0868	.1051	-.0213	-.08

Note: If the correlation coefficient is less than -.1994 or greater than .1979 then $p < .05$.

Another explanation for this finding is that the significant difference may be due to the parameters surrounding an advanced practicum trainee which differ from beginning practicum and intern trainees. For example, beginning practicum students are usually in a very structured environment with a predetermined schedule of courses and practica. Interns typically are stationed at one location and their roles are clearly defined. Alternatively, advanced practicum trainees are typically involved in multiple roles without much structure. Therefore, it seems reasonable to suspect that responding to the questionnaire may be less of a priority for the advanced practicum trainees and may thus have produced a differential response rate. In terms of how this difference may effect the results of the study, it seems reasonable to suspect that the the final sample may be less generalizable to advanced practicum trainees than it will be to beginning practicum trainees or interns.

Tests for the Covariate

A preliminary analysis was performed to determine if trainee experience level, as measured by months of supervised psychotherapy experience, meets the criteria for a covariate. These criteria include no interactions between the predictor variables and the covariate (Porter & Raudenbush, 1987) and a correlation between the criterion variables and the covariate greater than .40 (i.e., $\eta^2 = .16$) (Cox, 1957).

The covariate was not found to be significantly interacting with the predictor variables, with Goal, Pillai's Trace $v = .008$, $F\ (2,98) = .404$, $p = .669$, shrunken $\eta_m^2 < .001$, with Task, $v = .003$, $F\ (2,98) = .166$, $p = .847$, shrunken $\eta_m^2 < .001$, with Bond, $v = .000$, $F\ (2,98) = .021$, $p = .979$, shrunken $\eta_m^2 < .001$. The correlation between the covariate and the criterion variables however, was found to be shrunken $\eta^2 = .008$. The correlation between the covariate and the criterion variables did not reach a minimum of .40 (i.e., $\eta^2 = .16$). Therefore, number of months of supervised experience did not meet the criteria for a covariate, and thus was not included as a covariate in the major analyses.

Major Analyses

In order to test the hypotheses, a multivariate multiple regression analyses was conducted, which consisted of three predictor variables (change in scores between Time 1 and Time 2 on the Goals, Tasks, and Bond subscales) and two criterion variables (change in scores between Time 1 and Time 2 on the S-EI and TPRS scales). This analytic procedure was used in order to control for experimentwise error as well as the intercorrelation between the S-EI and the TPRS (Haase & Ellis, 1987). The descriptive statistics for the predictor and criterion variables are shown in Table 2. Overall, the proportion of the variance in the criterion variables accounted for by the predictor variables was found to be significant, Pillai's Trace $v = .246$, $F\ (6,206) = 4.83$, $p < .0001$, shrunken $\eta_m^2 = .106$, standardized discriminant function coefficients (λ): $\lambda_{SEI} = .222$, $\lambda_{TPRS} = .993$. The standardized discriminant function coefficients indicate that trainee satisfaction with supervision contributed most of the multivariate discrimination. Because multivariate significance was reached at the .05 level, two follow-up univariate analyses were conducted to test for each of the experimental hypotheses.

Trainee Self-Efficacy: An examination of the univariate F-test indicated that changes in the three predictor variables were not significantly related to changes in the trainees ratings of self-efficacy, $F\ (3,103) = .641$, $p = .641$, shrunken $\eta^2 < .001$. Given this non-significant result, no other follow-up analyses were conducted (e.g., tests to determine whether each predictor variable contributes uniquely to the equation). This finding indicates that the first hypothesis was not supported.

Satisfaction with Supervision: An examination of the univariate F-test indicated that changes in the three predictor variables were significantly related to changes in the trainees ratings of satisfaction with supervision, $F\ (3,103) = 10.11$, $p < .0001$, shrunken $\eta^2 = .213$. This finding provides support for the second hypothesis. Because the univariate analysis reached significance at the .05 level, follow-up tests were conducted to determine whether each predictor variable contributed uniquely to the equation. It was determined that only changes in the Bond factor contributed uniquely and significantly to the proportion of variance accounted for in changes in the trainees ratings of satisfaction with supervision, $F\ (1,103) = 5.44$, $p = .022$, shrunken $\eta^2 = .041$. That is, positive changes in the Bond factor was directly related to positive changes in the trainees reported satisfaction with supervision. Conversely, negative changes in the Bond factor was related to negative changes in the trainees reported satisfaction with supervision. Neither changes in the Task factor, $F\ (1,103) = 1.32$, $p = .254$, shrunken $\eta^2 = .003$, nor changes in the Goal factor, $F\ (1,103) =$

.033, p = .855, shrunken η^2 < .001, contributed uniquely and significantly to the variance accounted for by the full model in changes of the trainees ratings of satisfaction with supervision.

Post Hoc Analyses

A repeated measures multivariate t-test was conducted in order to assess changes in the predictor and criterion variables over time. The overall multivariate effect was found to be significant, Pillai's Trace v = .244, F (5,102) = 6.604, p < .001, shrunken η_m^2 = .207, standardized discriminant function coefficients (λ): λ_{GOAL} = -.197, λ_{TASK} = .695, λ_{BOND} = -.476, $\lambda_{S\text{-}EI}$ = -.939, λ_{TPRS} = -.047. The standardized discriminant function coefficients indicate that trainee self-efficacy contributed most of the multivariate discrimination. Because multivariate significance was reached at the .05 level, follow-up univariate analyses were conducted and examined. Follow-up F-tests revealed that only S-EI changed significantly over time, F (1,106) = 27.32, p < .001, shrunken η^2 = .197. None of the other predictor or criterion variables were found to be significant. Therefore, although no relationship was found between the factors of the supervisory working alliance and trainee self-efficacy, trainee self-efficacy did in fact change significantly over time.

Table 2

Means, Medians, and Standard Deviations of the change scores for the Three Working Alliance Inventory-Trainee subscales, the Self-Efficacy Inventory, the Trainee Personal Reaction Scale

	Mean	Median	Standard Deviation	Skewness
GOAL	.252	2.000	9.877	-1.134
TASK	-.458	0.000	10.223	-.600
BOND	.981	1.000	8.483	-1.302
S-EI	7.907	7.000	15.649	.500
TPRS	.065	0.000	6.780	-.084

Discussion

Supervision theorists have begun to recognize the presence of various common factors that cut across supervision models and that seem to be important in the change process of supervision (Holloway 1987). In particular, the supervisory working alliance has been posited to play a significant role in the outcome of supervision (Bordin, 1983). The present study investigated the nature and extent to which changes in the supervisory working alliance were related to changes in two supervision outcome criteria, trainees' self-efficacy expectations and trainees' satisfaction with supervision. In general, it appears that Bordin's (1983) model and theoretical propositions were supported. That is, the supervisory working alliance was significantly related to one aspect of supervision outcome.

Trainee Self-Efficacy

With regard to trainee self-efficacy, the results of the multivariate analyses suggested that changes in the three factors of the supervisory working alliance, taken together, were not significantly related to changes in a global measure of trainee self-efficacy. Thus, the first hypothesis of the present investigation was not supported. An examination of the data indicated that about half of the trainees reported that the supervisory working alliance changed positively and half reported that it changed negatively (see Table 2). Yet, as a group all trainees-regardless of the strength of the supervisory working alliance-significantly increased their self-efficacy expectations. Three alternative explanations for this finding are provided.

First, because the design of the present investigation was ex post facto, the concern that moderating variables may have affected the results becomes salient. Specifically, it appears that variables other than the supervisory relationship may have accounted for a significant change in trainee self-efficacy. In fact, these unknown variables may be more salient than the supervisory working alliance in the prediction of changes in trainee self-efficacy. In particular, the role that significant others such as other supervisors, peers, and clients have on changing one's self-efficacy expectations cannot be discounted.

It could be argued that the four sources of self-efficacy expectations which Bandura (1977) discussed (i.e., performance accomplishment, vicarious experience, verbal persuasion, and emotional arousal) were not completely garnered by the trainee from his or her individual supervisor, and instead were received by the trainee via other outlets, particularly in the case of a poor supervisory alliance. For example, the trainees may have received positive feedback on their clinical performance from their peers, who often interact with the trainee in the clinical setting more than the trainee's supervisor. The feedback received by the trainee could have, in turn, assisted the trainee to become more proficient in his or her work with clients. Additionally, the trainees could have received positive feedback from their clients who were helped by therapy. Role playing, a type of vicarious experience, could have taken place in a group supervision format or within the context of a practicum class. Both of these settings would typically induce emotional arousal (performance anxiety) in the trainee. Support and encouragement, two types of verbal persuasion, could have been derived from the interaction with significant others, such as peers and other supervisors. Therefore, individuals providing sources of self-efficacy expectations outside of the individual supervision relationship may have been more directly involved in increasing trainee self-efficacy.

So far external sources which may have affected or moderated an increase in trainee self-efficacy have been explored. Another explanation, involving cognitive dissonance, comes from within the trainees themselves. It could be argued that many of the trainees in the sample, particularly advanced practicum trainees and interns, have relatively high self-efficacy expectations. This hypothesis has been demonstrated in the present data as well as in previous literature (Friedlander & Snyder, 1983). In the present data the initial mean trainee self-efficacy for each trainee level were as follows: beginning practicum (112.6), advanced practicum (127.4), and intern (131.1). As such, these trainees come into supervision with a pre-set cognitive schema regarding their self-efficacy. As alluded to previously, a supervisory working alliance which becomes weaker over time will simultaneously affect the four sources of self-efficacy expectations and work towards decreasing the trainee's self-efficacy. At this point the trainee has the option of either assimilating and/or accommodating the new information which is inconsistent with his or her past understanding of himself or herself. Moreover, he or she may reject the new information and seek sources elsewhere which are more consistent with his or her self-schema. For example, if the supervisor's goal is to assist the trainee in becoming proficient in short term psychoanalytic psychotherapy, but the trainee perceives himself or herself as competent in behavioral therapy and prefers this approach, the supervisory alliance may be weak. Suppose further, that the supervisor implies to the trainee that he or she is performing poorly, an evaluation that contradicts the trainee's perceptions of himself or herself. These contradictions in ideas might produce cognitive dissonance in the trainee, leading him or her to disregard the supervisor's

information since it does not fit his or her pre-existing schema. Thus, consistent with the present findings, a negative change in the supervisory working alliance may not be reflected in negative changes in the trainee's self-efficacy as a therapist. Although this hypothesis would be true for advanced practicum trainees and interns, it may not be as accurate for beginning practicum trainees, since the latter are likely to have a less well formed schema of their self-efficacy expectations. This overall dynamic would be true if a previously strong supervisory working alliance is in the process of repair or, in particular, if a very poor alliance existed from the start.

A third explanation for the lack of a relationship between changes in the supervisory alliance and changes in trainee self-efficacy involves the lack of theoretical and operational specificity of the supervisory alliance factors. First, the nonsignificant results may be related to a lack of theoretical specificity of the three factors of the supervisory working alliance. For example, Bordin's model (1983) indicates no clear inclusion or exclusion criteria for the goals (e.g., therapy related skills) or tasks he proposed. Moreover, the criteria provided was far from extensive or comprehensive. "Agreements" in general on the goals and tasks of supervision may be too global a construct to assess significant differences, whereas the inclusion of specific goals or tasks, such as evaluating empathic responses via live supervision, may have proved to be more fruitful. As with the theoretical model, the operationalization of the supervisory working alliance lacks specificity with reference to goals or tasks. As such, the vague constructs may have been difficult to test and observe changes in. Thus, the lack of specificity in both the theoretical assumptions and the operationalization of the predictor variables may have limited the present investigation's ability to notice specific changes which may have occurred. A more clear operationalization of the predictor variable could have included items referencing specific therapy skills such as empathy or reflection, which the theoretical model would have clearly delineated in a comprehensive fashion.

Trainee Satisfaction With Supervision

With regard to trainee satisfaction with supervision, the results of the multivariate analyses suggested that changes in the three aspects of the supervisory working alliance were directly related to changes in the trainees report of satisfaction. Hence, if the supervisory working alliance became stronger over time, trainees perceived their supervisors' personal qualities and performance more positively, they judged their own behavior in supervision more positively, and they were more comfortable within the supervision context. Conversely, if the supervisory working alliance became weaker over time, trainees perceived their supervisors' personal qualities and performance more negatively, they judged their own behavior in supervision more negatively, and they were less comfortable within the supervision context. Thus, the second hypothesis of the current investigation was supported by the findings. So for example, based on specific items of the TPRS, a supervisory alliance which became stronger over time was related to increases in trainee eagerness to learn, responsiveness, and self-disclosure. Most models of supervision include these attributes in the conceptualization of a positive supervision experience (e.g., Blocher, 1983; Borders & Leddick, 1987).

In attempting to understand the results further, it was found that changes in the emotional bond factor contributed uniquely to the understanding of changes in trainee satisfaction with supervision over and above changes in the goal and task factors. Therefore, it appears that assessing the working alliance over time is important to consider in order for the bond factor develop. As Bordin (1983) hypothesized, changes in the goal and task factors may be minimal following the third supervision session; as such, this may account for why changes in these factors did not uniquely relate to changes in supervision outcome. Another possible explanation for the decreased role of the goal and task factors is that the three factors of the supervisory working alliance were so highly intercorrelated (i.e., all $rs \geq .67$) that differentiating between them may be more theoretically salient than statistically appropriate.

Trainee Experience Level

Interestingly and unexpectedly, the covariate chosen for the present investigation, number of months of supervised psychotherapy experience, did not fulfill the requirements of a covariate (i.e., did not relate substantially enough to the criterion variables), although the previous literature and many developmental models of supervision would suggest that it should have (Friedlander & Synder, 1983, Stoltenberg, 1981). For example, it could be argued that the process of maturation would develop more quickly for beginning practicum trainees than for interns. Hence, one might expect to find a strong relationship between changes in trainee self-efficacy and trainee experience level. However, this was not the case. A possible explanation for no effect between these two variables is that the measure of trainee experience was not sufficiently precise. For example, number of months of supervised experience may be a less accurate assessment of trainee experience level than number of previous clients seen. More specifically, it is possible for one trainee to

receive 12 months of supervised experience and see 45 clients whereas another trainee may receive 12 months of supervised experience and see only 15 clients. The first trainee is actually more experienced clinically than the second trainee even though they both have the same amount of supervised experience. In this example, these trainees do not differ on trainee experience level when assessed by number of months of supervised experience. However, differences would be noticed if experience level was assessed via number of client seen. Situations like this may have occurred in the present study resulting in the nonsignificant finding between trainee experience level and the criterion variables.

Limitations

The limitations for the current investigation stem primarily from the threats to validity inherent in ex post facto designs (Cook & Campbell, 1979). First, the inability to manipulate the predictor variables or randomly assign participants to conditions threatens the internal validity of this study. More specifically, moderating variables which could not be controlled for may have affected the results. For example, events that took place between the testing interval, such as a personal trauma of the supervisor or trainee, may have affected the supervisory working alliance, which in turn may have influenced the outcome ratings. Without experimental control over this extraneous variable, its effect on the results cannot be ruled out.

This design also limits the interpretation of the results to descriptive statements regarding the relationship between the predictor and criterion variables. Causal inferences cannot legitimately be made. Although the model of the supervisory working alliance suggests that a strong alliance leads to positive supervision outcomes, this causal link cannot be supported with the data obtained. Specifically, it is unclear whether positive changes in the supervisory working alliance led to greater satisfaction with supervision or conversely greater satisfaction with supervision led to positive changes in the supervisory working alliance.

In terms of external validity, the ex post facto design of this study allows the results to be generalizable only to trainees with demographic characteristics similar to those of the participants. In particular, the findings are less generalizable to advanced practicum trainees given that these trainees were less likely to participate at Time 2 than either beginning practicum or intern level trainees.

Another limitation is that this study only examined the supervisory process from the trainee's perspective. Thus, ratings from differing perspectives such as an objective rater or the supervisor may have offered alternative results. For example, in the therapeutic alliance literature, the reliability is low between therapist, client, and objective observer ratings (Horvath, 1992). However, evidence suggests that the working alliance from the therapist's or an objective rater's perspective may be less important to outcome (Horvath and Greenberg, 1985). The same may hold true for supervision.

In reference to the measures used, the results indicated that trainees tended to make ratings on the high end of the Working Alliance subscales. As a result, ceiling effects may have limited the extent to which differences across time could have been found. This is particularly so in relation to the non-significant findings for the relationship between changes in the supervisory working alliance and changes in trainee self-efficacy.

Conclusions

As mentioned earlier, the focus in the supervision literature appears to be shifting from the technical aspects of supervision to nonspecific factors in the prediction of outcome. Bordin's (1983) conceptualization of the supervisory working alliance provides a testable theoretical model which can lead to an understanding of one important constellation of nonspecific factors. The results of this study provides implications for supervision theory, research, and practice.

The present study provided some evidence which suggests that the model of the supervisory working alliance may lack the theoretical specificity which would allow for adequate operationalization, particularly in relation to supervision outcome. It is suggested that a revision of the model would include more specific and comprehensive outcome criteria. For example, a more extensive list of therapeutic skills could be included as they pertain to the supervisory working alliance goal, mastery of specific skills.

As alluded to previously, the results demonstrated high intercorrelations between the three factors of the supervisory working alliance (i.e., Goal, Task, and Bond) at Time 1, Time 2, and the change scores. As such, the theoretical model's delineation of the three factors may be more theoretically relevant than statistically relevant. Whether there are three factors of the supervisory working alliance or if there is only one has yet to be determined.

Alternatively, the results of the study seem to provide evidence which suggest that the supervisory working alliance changes over time and needs to be considered when evaluating its effectiveness. Of particular note is that the bond factor contributed uniquely and significantly when assessed over time. This finding had

been theoretically predicted yet had not been empirically examined, particularly in the therapeutic literature where the working alliance has been studied the most. These results, although preliminary, offer evidence which suggests that future researchers need to consider change over time when investigating the supervisory working alliance.

The present investigation demonstrated a contradiction of findings when compared with the previous research literature on the supervisory working alliance. Specifically, the nonsignificant relationship found between changes in the supervisory working alliance and changes in trainee self-efficacy contradicts findings in the literature on the supervisory working alliance and trainee self-efficacy where significance was reached (Efstation et. al 1990). One explanation is that the operationalization of the supervisory working alliance construct was different in the Efstation et. al 1990 study when compared to the present investigation. More specifically, their instrument appeared to be more empirically than theoretically derived. As such, their measure may be lacking in construct validity which could have led to finding relationships which were empirically supported yet theoretically inaccurate.

A related explanation for the divergent results is that the significant relationship found by Efstation et. al 1990, may have occurred as a result of a moderating variable, such as initial supervisory alliance strength, which was not controlled for. Specifically, because they assessed the supervisory working alliance and trainee self-efficacy at the same time, changes in the supervisory relationship were uncontrolled for and could have accounted for the relationship found. For example, it is possible that many of the trainees had a strong supervisory working alliance with their supervisors at the time the sample was taken. Furthermore, because the entire sample consisted of advanced practicum trainees and interns the overall level of self-efficacy was rather high to begin with. Therefore, it is impossible to tell how much the significant effect for trainee self-efficacy was due to the supervisory alliance versus a third variable which was characteristic of the population sampled. Results of the present investigation also bring into question the findings from the studies on the therapeutic working alliance when pre-testing of therapeutic outcome was not performed.

Finally, it can not be ruled out that the results in the Efstation et. al 1990 study were found due to Type I Error. They performed multiple statistical procedures without altering the alpha level which they assigned. As such, it is unclear if their results were due to chance alone rather than the relationship they hypothesized.

Overall, future research will need to replicate and extend the findings in the present investigation. First, in order to capture a more accurate representation of the supervision process it seems important that researchers consider changes in the supervisory working alliance over time. Second, it appears important to assess the influence that people other than the trainee's individual supervisor have on the sources of trainee self-efficacy. In this way future researchers could tease out the individual supervisor's specific influence on trainee self-efficacy. Finally, future researchers examining the supervisory working alliance may want to consider other relevant supervisory outcomes, such as trainee cognitive complexity (Blocher, 1983; Casey, 1992), as well as what variables influence the supervisory working alliance, such as theoretical orientation (Putney, Worthington, & McCullough, 1992) and role conflict/ambiguity (Olk & Friedlander, 1992). Investigations in these areas would allow for an expanded understanding of the saliency of the supervisory working alliance within the process of supervision.

In terms of supervision practice, results of the proposed study can be used to provide tentative implications for enhancing supervisors' effectiveness with trainees. It seems that trainees are more satisfied with a strong supervisory working alliance. For example, a stronger supervisory working alliance appears to be related to trainees' comfort with opening up and self-disclosing in supervision. Given that self-disclosure is seen as vital in most supervision training models, supervisors may be encouraged to create a positive supervisory working alliance in order to facilitate self-disclosure.

In conclusion, given the limitations of the present investigation, implications and applications of the use of the supervisory working alliance model should be tentative. The model appears to provide some testable predictions which needs continued examination. Replications and extensions of the results are necessary for the conclusions to be reliable. In particular, a more direct measure of the individual supervisor's influence on the trainee's self-efficacy may be useful in future investigations. Furthermore, alternative designs, such as analogue or quasi experimental designs, would allow for more of the threats to validity to be controlled for. Given the importance of the therapeutic working alliance to psychotherapy outcome, the supervisory working alliance has the potential to achieve similar stature in predicting supervision outcome.

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